Information architecture provides common ground

The Laboratory has some of the most powerful computers in the world, yet its employees still need to make phone calls to find a room for a meeting. The Laboratory performs state-of-the-art computing research, yet its employees must still type and hand-carry paper forms to get the signatures needed for a purchase request.

To lay the foundation for a more effective use of automation, the Laboratory has been developing an "information architecture" — a framework for the overall planning and coordination of information-related activities.

Earlier this year, the Laboratory Leadership Council adopted a set of 20 information architecture principles, high-level statements of the Laboratory's philosophy and objectives that were developed with extensive Laboratorywide participation.

To build specific instructions for implementing the principles, the Information Architecture Project Office is now inviting the Laboratory community to participate in the development of standards.

Information architecture standards are agreements about which technologies and tools to use and how they will be used. Standards create a common ground that ensures users that the tools will be supported, work with each other and allow users to share information with each other.

Co-leaders of the Information Architecture Project, Diane Weir and Karl-Heinz Winkler, both of the Computing, Information and Communications (CIC) Division, stress the need for common ground.

Weir compares the standards to language. "It's like using the same grammar," she says, "not the actual words, but the rules of how the words are put together so that different people can understand each other."

Adds Winkler, "What we want is to actually accomplish interoperability." Interoperability is the capability for various computer systems — for example, personal computers, Macintoshes and UNIX workstations — to connect to and understand each other. "We need that," Winkler says, "for Laboratory employees to really communicate with each other in a digital manner."

There have been numerous developments in digital communications in recent years. Clusters of users at the Laboratory can now use electronic mail to pass each other files containing formatted documents, illustrations and spreadsheets. Because there has never been a Laboratorywide standard approach to these tools, however, the clusters are frequently isolated. Members of one group cannot always successfully connect to other groups.

"Standardization allows us to accomplish the universal connectivity that we need to come together as a unified Laboratory," Winkler explains.

This does not mean that information architecture standards are rigid rules that everybody must follow to keep their jobs. "We're not out to legislate," Weir says. "We're out to make standards the obvious choice.

"Standards will let people focus on what they're delivering," she explains. "The decisions about the technical issues already will have been made so that people who don't want to worry about technical issues won't have to. People who follow the standards can have a higher degree of confidence that what they buy will work in conjunction with other tools at the Laboratory.

The overall standards development process is coordinated by an information architecture review team. This team, which was formed in July, currently includes representatives from eight different divisions. The team has set a goal of including representation from at least 75 percent of divisions in the standards development effort.

New teams are now being formed to develop standards for the desktop (word processors, spreadsheets, etc.), data (data formats, data interchange, etc.), infrastructure (networks, communications, etc.), applications (online forms, user interfaces, etc.), and data warehousing (strategies, processes and priorities for data warehousing).

Each of these new teams will include both customers, who understand user needs, and providers, who have technical expertise. A highly iterative process will generate guidelines first, which can then be used, tested and refined before they become standards.

If you are interested in joining one of the teams, please contact Weir at 7-9337, *drw@lanl.gov* by electronic mail, or at Mail Stop B260, or Winkler, 5-5530, *khw@lanl.gov*, Mail Stop B260.

For more information about the Information Architecture Project, refer to recent issues of "BITS: computing & communications news" and the online "Information Architecture Project" under "Computing at LANL" on Gopher and Mosaic.

For ongoing updates about the Information Architecture Project, watch the Bulletin Board section of the Newsbulletin.

—Tad Lane, Communications Arts and Services (CIC-1)